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Philips Healthcare

Description of the principal treatment processes for IWPS

Philips Healthcare
3000 Minuteman Road
Andover, MA 01810

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Philips Electronics – Andover Site
3000 Minuteman Road
Andover MA, 01810

September 22, 2010

I. INTRODUCTION

As of June 1, 2010 the Philips Electronics site has been graded as industrial grade 2 waste water treatment, plant code 2359. Per the requirements of 314 Code of Massachusetts Regulations (CMR) Part 12.04(3). Philips Electronics is located at 3000 Minuteman Road, Andover MA, 01810.

The Philips Electronics Andover Site manufactures medical equipment, including ultrasound systems, cardiac and monitoring systems, digital imaging systems and medical information systems. Site manufacturing operations that may generate wastewater include lapping, dicing, sputtering, chemical cleaning, QA/QC test and inspection, R&D and lightweight assembly. Solvent chemistries used for cleaning are collected and disposed of off-site and in accordance with applicable regulatory requirements. Base materials include leaded glass and ceramics, adhesives and plastics.

The majority of industrial wastewater is generated from the lapping, dicing and cleaning portions of Philips Electronics-Andover manufacturing operations. Non-lead bearing wastewater is collected at transfer stations for pumping to a dual-stage neutralization pretreatment system. Lead bearing wastewater from the polishing/lapping operations flows to a holding tank (250 gallons), located in the Centrifuge Treatment Room. Here wastewater is manually batch treated, operated only by licensed waste water treatment operators, to remove particulate lead using a Centrifuge. Typically, the Centrifuge is operated Mon-Fri first shift. As necessary, wastewater treatment operators are present during off-shifts and weekends if the Centrifuge needs to be run. Lead bearing waste water from the saw and back grinder processes flow to a holding tank (250 gallons) located in the Centrifuge, however, is not processed through the Centrifuge. Next, all lead bearing wastewater is pumped through filters to a holding tank (800 gallons), located in the main Waste Treatment Room. Lead bearing wastewater is then pumped through additional filters, a series of cationic resin canisters (ion exchange) and then finally through a two stage neutralization system. The first stage of the neutralization system is also the point where the non-lead bearing wastewater enters into the wastewater treatment system. The pH is recorded and monitored during both stages of the neutralization system. Following neutralization, the treated effluent is discharged to the Greater Lawrence Sanitary District sewer system. The effluent flow and pH are recorded and monitored at the final weir box. If the pH is above or below the pre-determined set points, in either neutralization tank or the final effluent, an alarm will notify the

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Security Response Center. Wastewater flows are less than the permitted limit of 10,000 gallons / day and on average are less than 5,000 gallons / day.

Here at the Philips Electronics-Andover site, a Facilities Management Contractor (FMC) operates the WWTS. The FMC maintains qualified individuals who are certified by the Massachusetts Board of Certification of WWT Facility Operators to staff the Philips Electronics WWTS. The Philips Electronics Senior Manager of Environmental, Health and Safety oversees the entire WWTS program.

Patrick C. Hunt

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